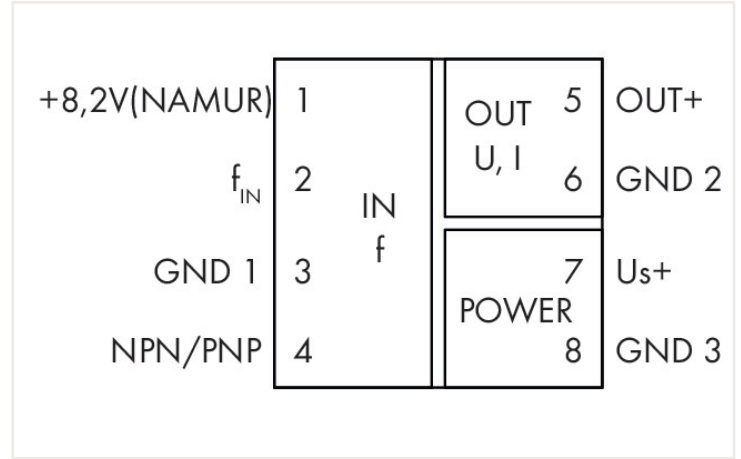
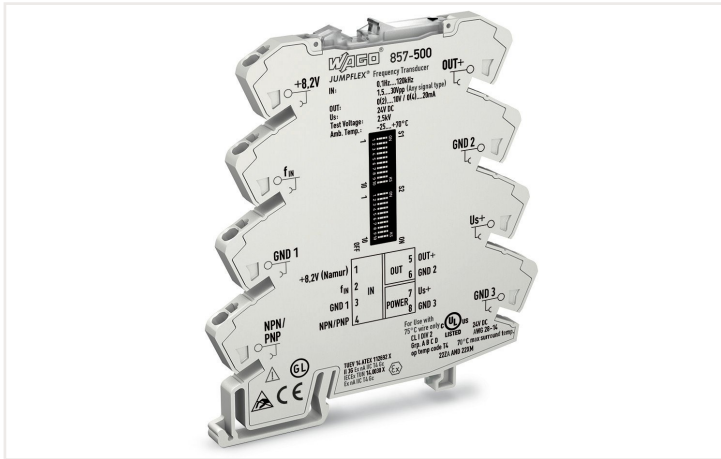


Data sheet | Item number: 857-500

Frequency signal conditioner; Current and voltage output signal; Configuration via software; Supply voltage: 24 VDC; 6 mm module width

<https://www.wago.com/857-500>

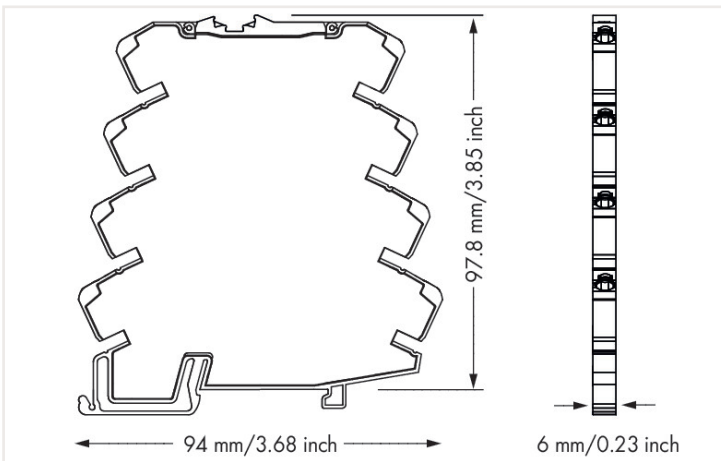
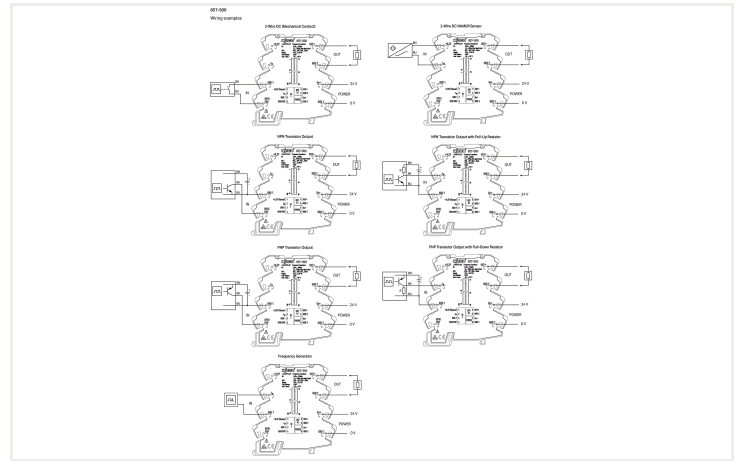


857-500 DP Switch Reliability

Switch Input	Output	Operation with Selected Frequency Range for Measurement
1	5	High
2	6	Low

DP Switch 01	DP Switch 02
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Signal	Measurement Range	Upper Limit of Output Range	Lower Limit of Output Range
1	0.1 - 120 kHz	0.1 V	0.1 V
2	0.1 - 120 kHz	0.1 V	0.1 V
3	0.1 - 120 kHz	0.1 V	0.1 V
4	0.1 - 120 kHz	0.1 V	0.1 V
5	0.1 - 120 kHz	0.1 V	0.1 V
6	0.1 - 120 kHz	0.1 V	0.1 V
7	0.1 - 120 kHz	0.1 V	0.1 V
8	0.1 - 120 kHz	0.1 V	0.1 V
9	0.1 - 120 kHz	0.1 V	0.1 V
10	0.1 - 120 kHz	0.1 V	0.1 V
11	0.1 - 120 kHz	0.1 V	0.1 V
12	0.1 - 120 kHz	0.1 V	0.1 V
13	0.1 - 120 kHz	0.1 V	0.1 V
14	0.1 - 120 kHz	0.1 V	0.1 V
15	0.1 - 120 kHz	0.1 V	0.1 V
16	0.1 - 120 kHz	0.1 V	0.1 V
17	0.1 - 120 kHz	0.1 V	0.1 V
18	0.1 - 120 kHz	0.1 V	0.1 V
19	0.1 - 120 kHz	0.1 V	0.1 V
20	0.1 - 120 kHz	0.1 V	0.1 V
21	0.1 - 120 kHz	0.1 V	0.1 V
22	0.1 - 120 kHz	0.1 V	0.1 V
23	0.1 - 120 kHz	0.1 V	0.1 V
24	0.1 - 120 kHz	0.1 V	0.1 V
25	0.1 - 120 kHz	0.1 V	0.1 V
26	0.1 - 120 kHz	0.1 V	0.1 V
27	0.1 - 120 kHz	0.1 V	0.1 V
28	0.1 - 120 kHz	0.1 V	0.1 V
29	0.1 - 120 kHz	0.1 V	0.1 V
30	0.1 - 120 kHz	0.1 V	0.1 V
31	0.1 - 120 kHz	0.1 V	0.1 V
32	0.1 - 120 kHz	0.1 V	0.1 V
33	0.1 - 120 kHz	0.1 V	0.1 V
34	0.1 - 120 kHz	0.1 V	0.1 V
35	0.1 - 120 kHz	0.1 V	0.1 V
36	0.1 - 120 kHz	0.1 V	0.1 V
37	0.1 - 120 kHz	0.1 V	0.1 V
38	0.1 - 120 kHz	0.1 V	0.1 V
39	0.1 - 120 kHz	0.1 V	0.1 V
40	0.1 - 120 kHz	0.1 V	0.1 V
41	0.1 - 120 kHz	0.1 V	0.1 V
42	0.1 - 120 kHz	0.1 V	0.1 V
43	0.1 - 120 kHz	0.1 V	0.1 V
44	0.1 - 120 kHz	0.1 V	0.1 V
45	0.1 - 120 kHz	0.1 V	0.1 V
46	0.1 - 120 kHz	0.1 V	0.1 V
47	0.1 - 120 kHz	0.1 V	0.1 V
48	0.1 - 120 kHz	0.1 V	0.1 V
49	0.1 - 120 kHz	0.1 V	0.1 V
50	0.1 - 120 kHz	0.1 V	0.1 V
51	0.1 - 120 kHz	0.1 V	0.1 V
52	0.1 - 120 kHz	0.1 V	0.1 V
53	0.1 - 120 kHz	0.1 V	0.1 V
54	0.1 - 120 kHz	0.1 V	0.1 V
55	0.1 - 120 kHz	0.1 V	0.1 V
56	0.1 - 120 kHz	0.1 V	0.1 V
57	0.1 - 120 kHz	0.1 V	0.1 V
58	0.1 - 120 kHz	0.1 V	0.1 V
59	0.1 - 120 kHz	0.1 V	0.1 V
60	0.1 - 120 kHz	0.1 V	0.1 V
61	0.1 - 120 kHz	0.1 V	0.1 V
62	0.1 - 120 kHz	0.1 V	0.1 V
63	0.1 - 120 kHz	0.1 V	0.1 V
64	0.1 - 120 kHz	0.1 V	0.1 V
65	0.1 - 120 kHz	0.1 V	0.1 V
66	0.1 - 120 kHz	0.1 V	0.1 V
67	0.1 - 120 kHz	0.1 V	0.1 V
68	0.1 - 120 kHz	0.1 V	0.1 V
69	0.1 - 120 kHz	0.1 V	0.1 V
70	0.1 - 120 kHz	0.1 V	0.1 V
71	0.1 - 120 kHz	0.1 V	0.1 V
72	0.1 - 120 kHz	0.1 V	0.1 V
73	0.1 - 120 kHz	0.1 V	0.1 V
74	0.1 - 120 kHz	0.1 V	0.1 V
75	0.1 - 120 kHz	0.1 V	0.1 V
76	0.1 - 120 kHz	0.1 V	0.1 V
77	0.1 - 120 kHz	0.1 V	0.1 V
78	0.1 - 120 kHz	0.1 V	0.1 V
79	0.1 - 120 kHz	0.1 V	0.1 V
80	0.1 - 120 kHz	0.1 V	0.1 V
81	0.1 - 120 kHz	0.1 V	0.1 V
82	0.1 - 120 kHz	0.1 V	0.1 V
83	0.1 - 120 kHz	0.1 V	0.1 V
84	0.1 - 120 kHz	0.1 V	0.1 V
85	0.1 - 120 kHz	0.1 V	0.1 V
86	0.1 - 120 kHz	0.1 V	0.1 V
87	0.1 - 120 kHz	0.1 V	0.1 V
88	0.1 - 120 kHz	0.1 V	0.1 V
89	0.1 - 120 kHz	0.1 V	0.1 V
90	0.1 - 120 kHz	0.1 V	0.1 V
91	0.1 - 120 kHz	0.1 V	0.1 V
92	0.1 - 120 kHz	0.1 V	0.1 V
93	0.1 - 120 kHz	0.1 V	0.1 V
94	0.1 - 120 kHz	0.1 V	0.1 V
95	0.1 - 120 kHz	0.1 V	0.1 V
96	0.1 - 120 kHz	0.1 V	0.1 V
97	0.1 - 120 kHz	0.1 V	0.1 V
98	0.1 - 120 kHz	0.1 V	0.1 V
99	0.1 - 120 kHz	0.1 V	0.1 V
100	0.1 - 120 kHz	0.1 V	0.1 V



Dimensions in mm

Short description:

WAGO's frequency signal conditioner collects 0.1–120 kHz signals from NAMUR, NPN or PNP sensors and converts them into a standard analog signal.

Features:

- PC configuration interface
- Signal acquisition from NAMUR, NPN or PNP sensors
- Calibrated measurement range switching
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Technical data

Configuration

Configuration options	DIP switch WAGO Interface Configuration Software WAGO Interface Configuration App
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Input

Input signal type	Frequency generators NAMUR sensors NPN/PNP transistor outputs Mechanical contact (dry contact)
-------------------	---

Input – sensor type 1

Sensor type 1	Frequency generator NPN/PNP transistor output with pull-up or pull-down resistor
Measurement range (frequency) 1	0.1 Hz ... 120 kHz
Measurement span 1 (min.)	10 Hz
Signal level	1.5 V; 10 V; 20 V (switchable)
Signal form	any
Coupling	AC/DC (adjustable; AC above 10 Hz)

Input – sensor type 2

Sensor type 2	NAMUR sensor (DIN EN 50227)
Measurement range (frequency) 2	0.1 Hz ... 1 kHz
Measurement span 2 (min.)	10 Hz
Hysteresis	0.45 mA

Input – sensor type 3

Sensor type 3	NPN/PNP transistor output without pull-up or pull-down resistor Mechanical contact (dry contact)
Measurement range (frequency) 3	0.1 Hz ... 20 kHz
Measurement span 3 (min.)	100 Hz
PNP switching voltage	≥ 7.5 V (+ residual voltage $U_{CE sat}$)

Output – analog

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 k Ω
Load impedance (current output)	≤ 600 Ω

Signal processing

Conversion time	Peak-time measurement method (
-----------------	--------------------------------

Measurement error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K

Supply

Power supply type	24 VDC
Nominal supply voltage U_s	DC 24 V
Supply voltage range	± 30 %
Current consumption at nominal supply voltage	≤ 40 mA

Safety and protection

Test voltage

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
------------------------------------	-------------------------

Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG

Physical data

Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

Material data

Fire load	0.405 MJ
Weight	36.2 g

Environmental requirements

Ambient temperature (operation at U_N)	-25 ... 70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	EN 61373

Commercial data

Product Group	6 (Interface Electronics)
eCl@ss 10.0	27-21-01-28
eCl@ss 9.0	27-21-01-28
ETIM 8.0	EC002918
ETIM 7.0	EC002918
PU (SPU)	1 Stück
Packaging type	Bag
Country of origin VKOrg Germany	DE
GTIN	4050821226741
Customs tariff number VKOrg Germany	85437090300

Approvals and certificates

General approvals



Approval	Standard	Certificate name
EAC Brjansker Zertifizierungs- stelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19
UL UL International Nether- lands B.V. (ORDINARY LO- CATIONS)	UL 508	E175199 Sec.4

Approvals for marine applications



Approval	Standard	Certificate name
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAA00001D1
PRS Polski Rejestr Statków	-	TE/2186/880590/18

Approvals for hazardous areas



Approval	Standard	Certificate name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
CCCEX CQST/CNEX	CNCA-C23-01	2020312310000210 (Ex nA IIC T4 Gc)
EAC Brjansker Zertifizierungs- stelle	TP TC 012/2011	EAC RU C-DE.AM02. B.00144/19 (2 Ex nA IIC T4 Gc X)
IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 857-500 ↓

Documentation

Bid Text
857-500 09.01.2019 docx 18.77 KB ↓

Instruction Leaflet
Messumformer und Trennverstärker pdf 2640.84 KB ↓

CAD/CAE-Data

CAD data
2D/3D Models 857-500 ↓

CAE data
EPLAN Data Portal 857-500 ↓
WSCAD Universe 857-500 ↓
ZUKEN Portal 857-500 ↓

Engineering-Software

Software for Interface-Products

WAGO Interface Configuration Software G2 FULL	1.0.8.6 20.01.2022	exe 111289.67 KB	
WAGO Interface Configuration Software G2 SMALL	1.0.8.6 20.01.2022	exe 29307.84 KB	

1 Compatible products

1.1 Optional accessories

1.1.1 Cables and connectors

1.1.1.1 Communication cable



Item no.: 750-923

Configuration cable; USB connector;
Length: 2.5 m



Item no.: 750-923/000-001

Configuration cable; USB connector;
Length: 5 m

1.1.2 Communication

1.1.2.1 Bluetooth



Item no.: 750-921

Bluetooth® Adapter

1.1.3 Installation

1.1.3.1 Mounting accessories



Item no.: 249-117

Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray



Item no.: 249-197

Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray



Item no.: 249-116

Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.1.4 Interface module

1.1.4.1 Interface adapters



Item no.: 857-980

Interface adapter; 16-pole; analog

1.1.5 Jumper

1.1.5.1 Jumper



Item no.: 281-482

Jumper; 2-way; insulated; gray



Item no.: 859-410/000-006

Jumper; for jumper slot; 10-way; insulated; blue



Item no.: 859-410

Jumper; for jumper slot; 10-way; insulated; light gray



Item no.: 859-410/000-005

Jumper; for jumper slot; 10-way; insulated; red



Item no.: 859-410/000-029

Jumper; for jumper slot; 10-way; insulated; yellow



Item no.: 859-402/000-006

Jumper; for jumper slot; 2-way; insulated; blue



Item no.: 859-402

Jumper; for jumper slot; 2-way; insulated; light gray



Item no.: 859-402/000-005

Jumper; for jumper slot; 2-way; insulated; red



Item no.: 859-402/000-029

Jumper; for jumper slot; 2-way; insulated; yellow



Item no.: 859-403/000-006

Jumper; for jumper slot; 3-way; insulated; blue



Item no.: 859-403

Jumper; for jumper slot; 3-way; insulated; light gray



Item no.: 859-403/000-005

Jumper; for jumper slot; 3-way; insulated; red



Item no.: 859-403/000-029

Jumper; for jumper slot; 3-way; insulated; yellow



Item no.: 859-404/000-006

Jumper; for jumper slot; 4-way; insulated; blue



Item no.: 859-404

Jumper; for jumper slot; 4-way; insulated; light gray



Item no.: 859-404/000-005

Jumper; for jumper slot; 4-way; insulated; red



Item no.: 859-404/000-029

Jumper; for jumper slot; 4-way; insulated; yellow



Item no.: 859-405/000-006

Jumper; for jumper slot; 5-way; insulated; blue



Item no.: 859-405

Jumper; for jumper slot; 5-way; insulated; light gray



Item no.: 859-405/000-005

Jumper; for jumper slot; 5-way; insulated; red



Item no.: 859-405/000-029

Jumper; for jumper slot; 5-way; insulated; yellow



Item no.: 859-406/000-006

Jumper; for jumper slot; 6-way; insulated; blue



Item no.: 859-406

Jumper; for jumper slot; 6-way; insulated; light gray



Item no.: 859-406/000-005

Jumper; for jumper slot; 6-way; insulated; red



Item no.: 859-406/000-029

Jumper; for jumper slot; 6-way; insulated; signal yellow



Item no.: 859-407/000-006

Jumper; for jumper slot; 7-way; insulated; blue



Item no.: 859-407

Jumper; for jumper slot; 7-way; insulated; light gray



Item no.: 859-407/000-005

Jumper; for jumper slot; 7-way; insulated; red



Item no.: 859-407/000-029

Jumper; for jumper slot; 7-way; insulated; yellow



Item no.: 859-408/000-006

Jumper; for jumper slot; 8-way; insulated; blue



Item no.: 859-408

Jumper; for jumper slot; 8-way; insulated; light gray



Item no.: 859-408/000-005

Jumper; for jumper slot; 8-way; insulated; red



Item no.: 859-408/000-029

Jumper; for jumper slot; 8-way; insulated; yellow



Item no.: 859-409/000-006

Jumper; for jumper slot; 9-way; insulated; blue



Item no.: 859-409

Jumper; for jumper slot; 9-way; insulated; light gray



Item no.: 859-409/000-005

Jumper; for jumper slot; 9-way; insulated; red



Item no.: 859-409/000-029

Jumper; for jumper slot; 9-way; insulated; yellow

1.1.6 Marking

1.1.6.1 Marker



Item no.: 793-5501

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item no.: 793-502

WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-566

WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-503

WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white

1.1.6.1 Marker



Item no.: 793-504

WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-506

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-501

WMB marking card; as card; not stretchable; plain; snap-on type; white



Item no.: 2009-115

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.6.2 Marking strip



Item no.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.7 Power supply

1.1.7.1 Power supply unit



Item no.: 787-2852

Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

1.1.8 Terminal blocks

1.1.8.1 Supply module



Item no.: 857-979

Supply and through module

1.1.8.2 Through terminal block



Item no.: 857-979

Supply and through module

1.1.9 Tool

1.1.9.1 Operating tool

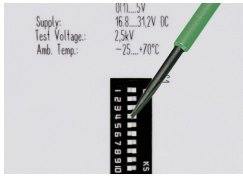


Item no.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation notes

Configuring



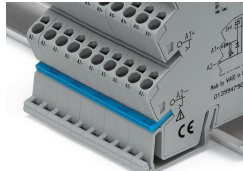
Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

Configuration via WAGO Interface Configuration App

Commoning



Commoning, not discrete wiring – Same outline allows use of a single in-line, push-in jumper.